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Communications for Statistical Applications and Methods Style Guide

Mongyong Lee[1,a], Gildong Hong[b], Joo-Mong Ko[a]

[a]Department of Statistics, Hankuk University; [b]Department of Statistics, Daehan University

Abstract

Papers submitted for publication to *Communications for Statistical Applications and Methods* should be prepared by LaTeX. This document explains how to use LaTeXand an accompanying class file `csam.cls`

Keywords: LaTeX, csam.sty, style file.

1. Introduction

Author who will submit a paper to Communications for Statistical Applications and Methods is recommended to use LaTeX with "csam.cls" for preparing manuscript. The "csam.cls" is the LaTeX class file incorporating the style of Communications for Statistical Applications and Methods(CSAM). This document explains how to use the "csam.cls".

Basic LaTeX offers a high level of mathematical typesetting capabilities. However, when complex equations or other mathematical constructs have to be input repeatedly, it is up to you to define new commands or environments to ease the burden of typing. The American Mathematical Society(AMS) has developed an extension of TeX, known as $\mathcal{AMS}$-LaTeX. They make the preparation of mathematical compuscripts less time-consuming and the copy more consistent. Recently these extensions were ported to LaTeX. It can be used by calling `amsmath` package. CSAM strongly recommends authors to use the `amsmath` package, since it gives much better equations than the plain LaTeX. For instance, the `amsmath` structures give correct spacing around the alignment points, while the `eqnarray` environment produces extra spaces depending on the parameter settings for `array`. See (1.1), which is produced by `align` environment in the `amsmath` environment in the plain LaTeX. If you do not want to use a equation number, you can use `align*` or `nonumber`.

$$\begin{aligned} x^2 + y^2 &= z^2 \\ x^3 + y^3 &< z^3 \end{aligned} \tag{1.1}$$

$$\begin{aligned} x^2 + y^2 &= z^2 \\ x^3 + y^3 &< z^3 \end{aligned}$$

In what follows, we will assume that readers are familiar to the $\mathcal{AMS}$-LaTeX, and TeXsystem is already installed with "amsmath", "natbib", "ifthen", "txfonts", "fancyhdr" and "caption" packages. If they are not installed in your computer, update your TeXsystem. The "csam.cls" should be placed in a directory where the TeXsystem can find automatically. A convenient method is putting the "csam.cls" and your manuscript in the same directory.

Footnote for research fund.

[1] Corresponding author: Professor, Department of Statistics, Hankuk University, 86-1 Hankang-Dong, Mapo-Gu, Seoul 135-703, Korea. E-mail: office@kss.or.kr

2. Main Body

2.1. Getting Started

A standard LaTeX manuscript should start with

```
\documentclass[eng]{csam}
\usepackage{graphicx}
\usepackage{natbib}
\usepackage{amsmath,multirow}
\usepackage{enumerate,array}
\heading{The Running Head}%{Author1, Author2}
\begin{document}
   ... main boby
\end{document}
```

Usually you don't need to modify here except the "`Running Title`" and "`Authors`" which would appear in the running headers. However, you are free to add some packages or your own macros which are necessary only for your manuscript.

2.2. Title page

The first part of main body is composed of article title, author names, and their affiliations. You should also provide the abstract of article and some keywords. Following commands are self explanatory.

```
\title{Title of Article\footnote{related footnotes.}}
\author{Author1\footnote{Corresponding author: Jobtitle, affiliation,
        address, E-mail: author1@kss.or.kr}\address[a]{Short affiliation,},
        Author2\same[a], Author3\address[b]{Short affiliation}}
\begin{abstract}
    Body of abstract
\end{abstract}
\keywords{Keyword1, keyword2, keyword3.}
```

2.3. Section, subsection and subsubsection

After the keywords you can begin with a heading. The heading is usually used to introduce each topic. You can use 3 levels of headings which are produced by

```
1st level: \section{...}
2nd level: \subsection{...}
3rd level: \subsubsection{...}
```

2.4. Theorem and theorem-like environments

The theorem-like environments can be defined in standard LaTeX document classes. In this section, we will demonstrate various theorem-like environments which are predefined in `csam.sty`.

Theorem 1. *This is an example of theorem environment. The counter of theorem will be enumerated automatically and sequentially throughout article.*

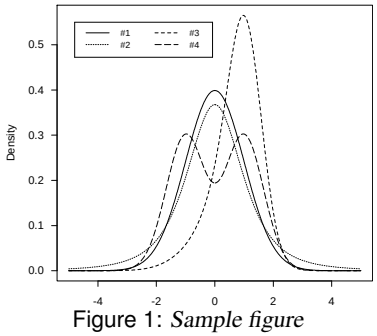

Figure 1: *Sample figure*

Theorem 2. (Description of theorem) *This is an example of theorem with an optional argument. This can be produced by "*`\begin{theorem}[Description of theorem]`*".*

Lemma 1. *This is an example of lemma environment. The enumeration of Lemma is just like Theorem.*

Corollary 1. *This is an example of corollary environment. Each of Theorem, Lemma and Corollary has its own counter, i.e., the enumeration will be done separately.*

Proof: This is an example of proof environment. Using the proof environment, the symbol '□' will be supply automatically at the end of proof. □

`proposition`, `example`, `remark`, and `definition` environments are predefined in csam.cls.

2.5. Tables and Figures

LaTeXhas two environments, `table` and `figure`, for creating tables and figures. Traditionally the figure and the table should be placed at the top of pages. So you must supply the position specifier as `[t]`. Also the caption for a table is usually placed above the table while the caption for a figure is usually placed below the figure. The `\label{...}` command must follow the `\caption{...}` command to get correct table and figure numbers with the `\ref{...}`.

Following example produce Figure 1 at the top of this page.

```
\begin{figure}[t]
\centering
\includegraphics[height=4cm,keepaspectratio=true]{figure_sam.eps}
\caption{Sample figure}
\label{fig:rsxb}
\end{figure}
```

Similarly you can produce a table using commands something like:

```
\begin{table}[t]
\footnotesize
\centering
\caption{Structure of data.}\label{tb:data1}
\tabcolsep=35.5pt
\begin{tabular}{ccccc}
```

Table 1: Structure of data.

N	factor level			
	1	2	$\cdots$	I
1	x_{11}	x_{21}	$\cdots$	x_{I1}
2	x_{12}	x_{22}	$\cdots$	x_{I2}
$\vdots$	$\vdots$	$\vdots$	$\ddots$	$\vdots$
n	x_{1n}	x_{2n}	$\cdots$	x_{In}

```
\hline \hline
\multirow{2}*{$N$} & \multicolumn{4}{c}{factor level} \\\cline{2-5}
 & 1 & 2 & $\cdots$ & $I$ \\\hline
1        & $x_{11}$ & $x_{21}$ & $\cdots$ & $x_{I1}$ \\
2        & $x_{12}$ & $x_{22}$ & $\cdots$ & $x_{I2}$ \\
$\vdots$ & $\vdots$ & $\vdots$ & $\ddots$ & $\vdots$ \\
$n$      & $x_{1n}$ & $x_{2n}$ & $\cdots$ & $x_{In}$ \\
\hline \hline
\end{tabular}
\end{table}
```

3. References

The references cited in your article should be provided within reference environment. An example of references(book, journal, paper) is given below:

```
\begin{reference}
\item[] Box, G. E. P. and Draper, N. R. (1969). {\em Evolutionary Operation},
        John Wiley \& Sons, New York.
\item[] Wald, A. (1949). Note on the consistency of the maximum likelihood
        estimate, {\em Annals of Mathematical Statistics}, {\bf 20}, 595--601.
\item[] Seking, J. W. (2005). Forecasting item production with ARIMA model,
        {\em Technical Paper}, Available from: http://tech.journal.net/2005/
        05102.pdf
\end{reference}
```

Traditionally the reference should be placed at the end of paper.

Appendix: Appendix Title

There are three types of display methods.

First, there is no title of appendix.

```
\appendix
\section*{}
```

Second, there is a title of appendix.

```
\appendix
\section*{Title}
```

Third, there are more than one title.

```
\appendix
\section{Title1}
...
\section{Title2}
```

Acknowledgement

We are grateful to the .....

References

Box, G. E. P. and Draper, N. R. (1969). *Evolutionary Operation*, John Wiley & Sons, New York.

Wald, A. (1949). Note on the consistency of the maximum likelihood estimate, *Annals of Mathematical Statistics*, **20**, 595–601.

Seking, J. W. (2005). Forecasting item production with ARIMA model, *Technical Paper*, Available from: http://tech.journal.net/2005/ 05102.pdf

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